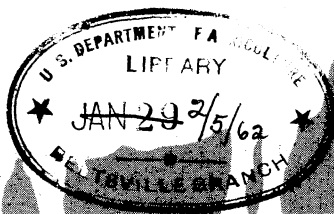
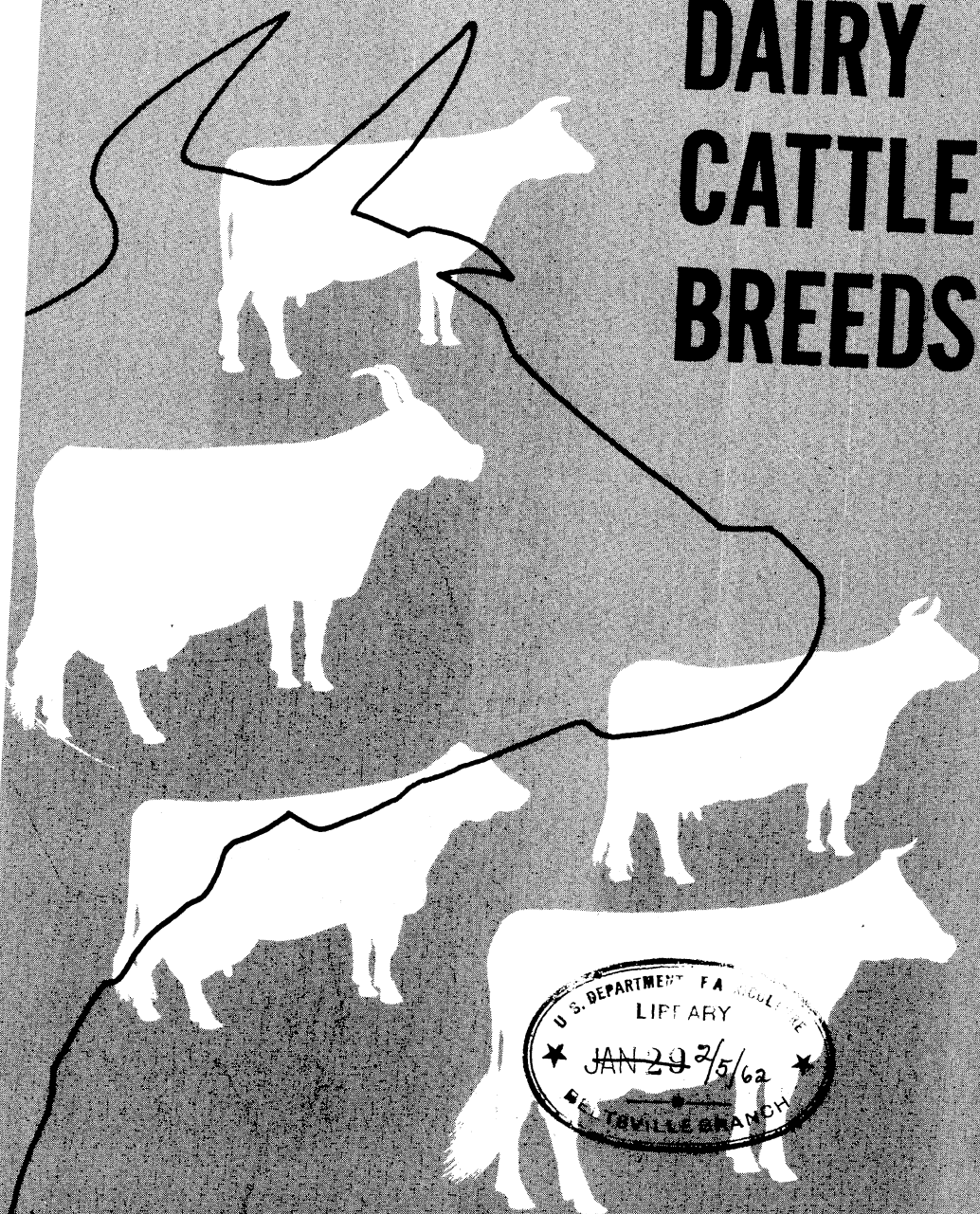


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# DAIRY CATTLE BREEDS



Farmers' Bulletin No. 1443  
U. S. DEPARTMENT OF AGRICULTURE

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Growth Through Agricultural Progress

*Prepared by*

ANIMAL HUSBANDRY RESEARCH DIVISION

AGRICULTURAL RESEARCH SERVICE

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# Dairy Cattle Breeds

A modern dairy breed may be loosely defined as a "family." Like the members of a human family, all dairy cattle of a certain breed have a common origin. They also have characteristics that are readily distinguished. These characteristics include size, shape of body and horns, and color—or combinations of color in certain prescribed patterns. An individual within a breed may be a grade, a purebred, or a registered purebred (see p. 19).

## BREEDS

About 70 percent of the dairy cattle in the United States are grades or purebreds of six breeds—Ayrshire, Brown Swiss, Guernsey, Holstein-Friesian, Jersey, and Red Danish.

Each breed is discussed in the following pages. Famous animals from five breeds are pictured.

Definitions for age categories used in the tables showing production appear on page 19. Production figures, except for Red Danish, were furnished by the respective breed associations. They represent average production of all cows of the given breed on test during the herd-test year reported in 1959.

The Red Danish production figures were compiled from Dairy Herd Improvement Association (see p. 15) records for 1957.

## Ayrshire

Ayrshires originated in the county of Ayr, Scotland. They were first recognized as a dairy breed in 1814, but details of their development cannot be traced.

Ayrshires were first imported into the United States in 1822. Other early importations were in 1828 and 1831. The breed is now well established in nearly every State. Many famous Ayrshire herds in the United States have contributed to improvement of the breed.

Scorecards adopted by the Purebred Dairy Cattle Association (see p. 17) describe the Ayrshire in this way:

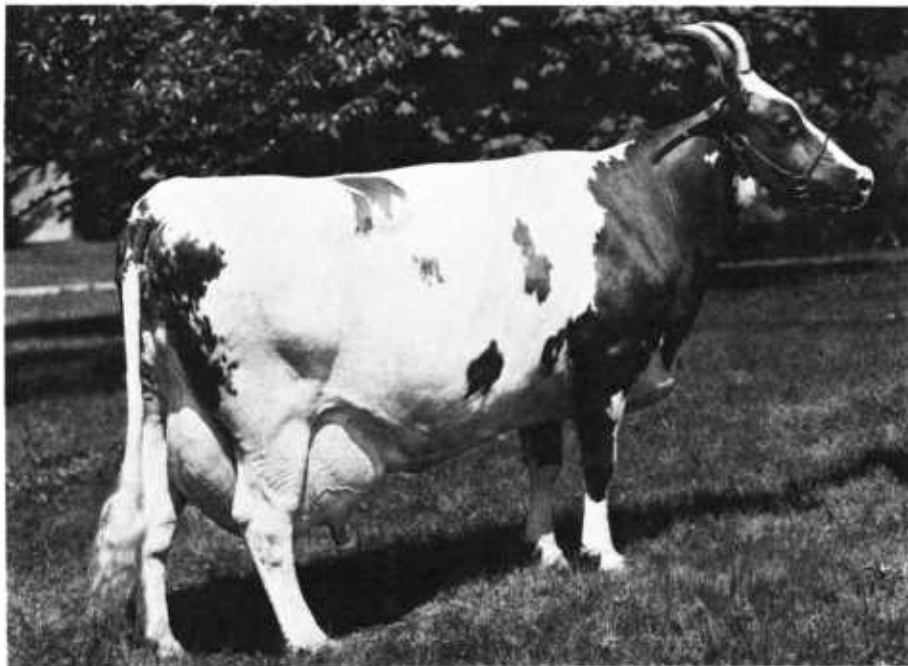
*Color.*—Light to deep cherry red, mahogany, brown, or a combination of these colors with white markings preferred, black or brindle objectionable.

*Size.*—A mature cow in milk should weigh at least 1,200 pounds and a mature bull in breeding condition, at least 1,850 pounds.

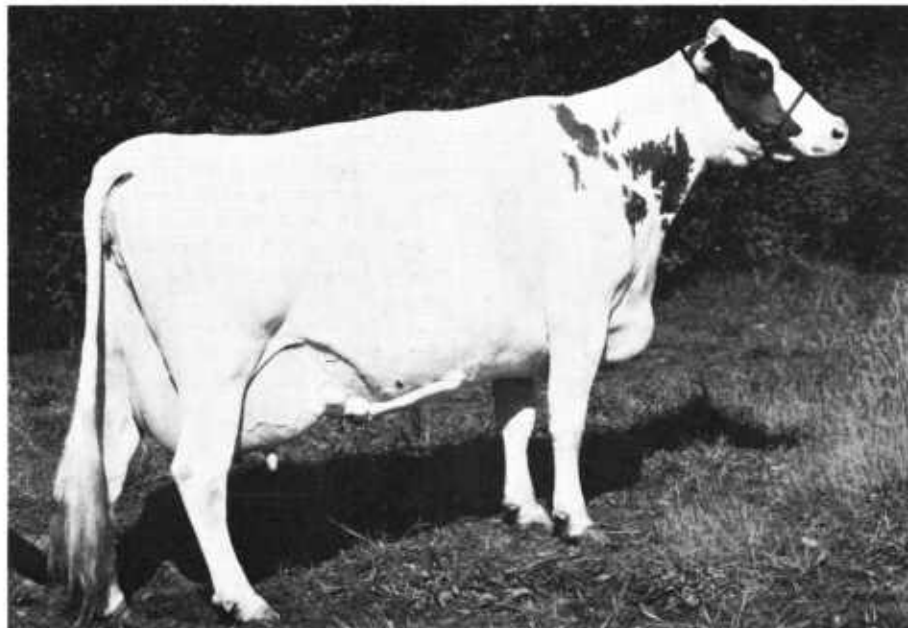
*Horns.*—Inclining upward, refined, medium length, and tapered toward tips. No discrimination for absence of horns.

Neshaminy Miss Phett (fig. 1), a famous Ayrshire cow, once held the United States record for the highest yearly production of butterfat (1,036 pounds).

Another famous Ayrshire, Galney Rosette H (fig. 2), produced in her lifetime 140,000 pounds of milk, classified Excellent. She has a



*Figure 1.*—Ayrshire cow: Neshaminy Miss Phett. (Courtesy of Ayrshire Breeding Association.)



*Figure 2.*—Ayrshire cow: Galney Rosette H. (Courtesy of Ayrshire Breeding Association.)

305-day, twice-daily milking record, begun at 11 years and 3 months of age, of over 20,000 pounds of milk.

Neshaminy Preferred (fig. 3) is an outstanding Ayrshire bull. He ranks as a Century Sire with 100 tested daughters (292 records) that average 11,480 pounds of milk, 593 pounds of butterfat (test 4.39 percent), in mature equivalent and twice-daily, 305-day milking.

## Brown Swiss

Brown Swiss dairy cattle originated in Switzerland. Like the Ayrshire, Brown Swiss development cannot be traced.

The first Brown Swiss cattle were brought to the United States in

1869. Other cattle were brought in 1882, 1889, and 1906. All of these importations amounted to only 155 head. Descendants of the 155 fill our famous herds in nearly every State.

Scorecards adopted by the Purebred Dairy Cattle Association describe Brown Swiss in this way:

*Color.*—Solid brown, varying from light to dark. White or off-color spots objectionable. Females with any white or off-color markings above the underside of the belly or with white core in switch do not meet color standards of the Brown Swiss breed and shall be so designated when registered. Pink noses and light streaks up the side of the face objectionable.

*Size.*—The minimum weight for mature cows should be about 1,400 pounds, and for mature bulls about 2,000 pounds.

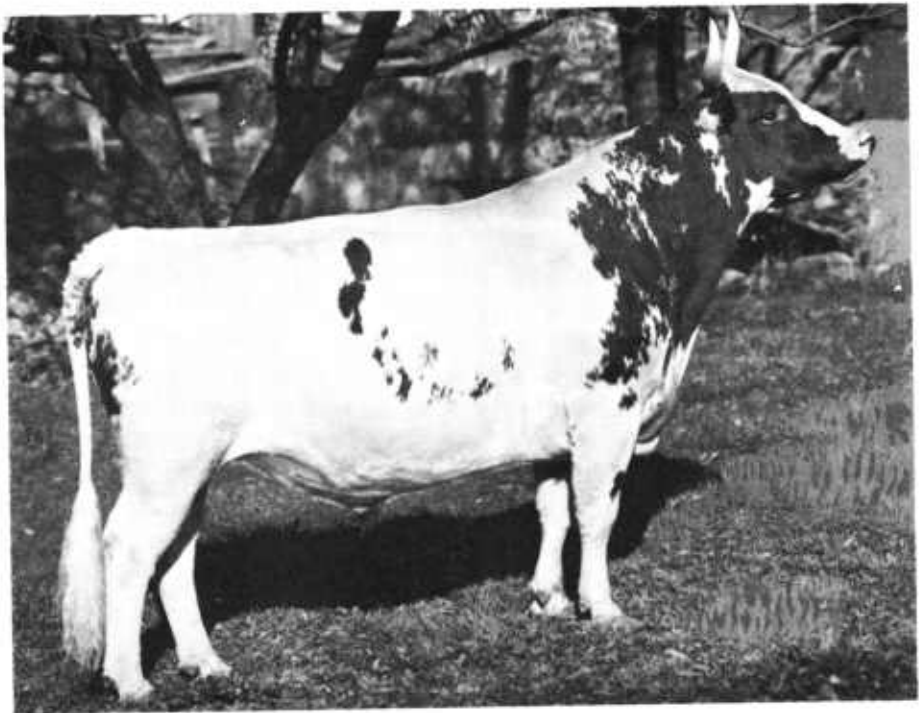


Figure 3.—Ayrshire bull: Neshaminy Preferred. (Courtesy of Ayrshire Breeding Association.)

TABLE 1.—*Ayrshire production*

Age class	Pounds of milk	Pounds of butterfat
Yearlings.....	7, 806	323
Junior 2-year-olds.....	8, 390	350
Senior 2-year-olds.....	8, 649	361
Junior 3-year-olds.....	9, 160	385
Senior 3-year-olds.....	9, 710	405
Junior 4-year-olds.....	10, 168	421
Senior 4-year-olds.....	10, 254	427
Mature cows.....	10, 905	442

*Horns.*—Incurving and inclining slightly up. Of medium length, lacking coarseness, tapering toward tips. Polled animals not barred from registry. No discrimination for absence of horns.

Letha Irene Pride (fig. 4), a world-record butterfat producer, milked three times a day for 365 days, produced 34,810.9 pounds of milk and 1,733.13 pounds of butterfat, calving at 11 years and 5 months of age.

Lee's Hill Keeper's Raven (fig. 5), the second-high, world-record butterfat producer, milked three times daily for 365 days, produced 34,850.9 pounds of milk and 1,579.28 pounds of butterfat, calving at 9 years and 9 months of age.

Rainbow Wonder (fig. 6), an outstanding Brown Swiss bull, has been used as a sire by the Northern Illinois Breeding Cooperative. The average production of 101 of his artificially sired daughters was 11,339 pounds of milk (test, 4.1 percent) and 470 pounds of butterfat during the last test year.

## Guernsey

Guernsey dairy cattle originated on the island of Guernsey, off the coast of England. In 1830 or 1831 the first Guernseys—two heifers and one bull—were imported into America. Descendants of the bull and one heifer appear in Guernsey herds today. Other importations were in 1840, 1870, 1913, and 1914. These importations amounted to about 13,000 animals.

Scorecards adopted by the Purebred Dairy Cattle Association describe the Guernsey in this way:

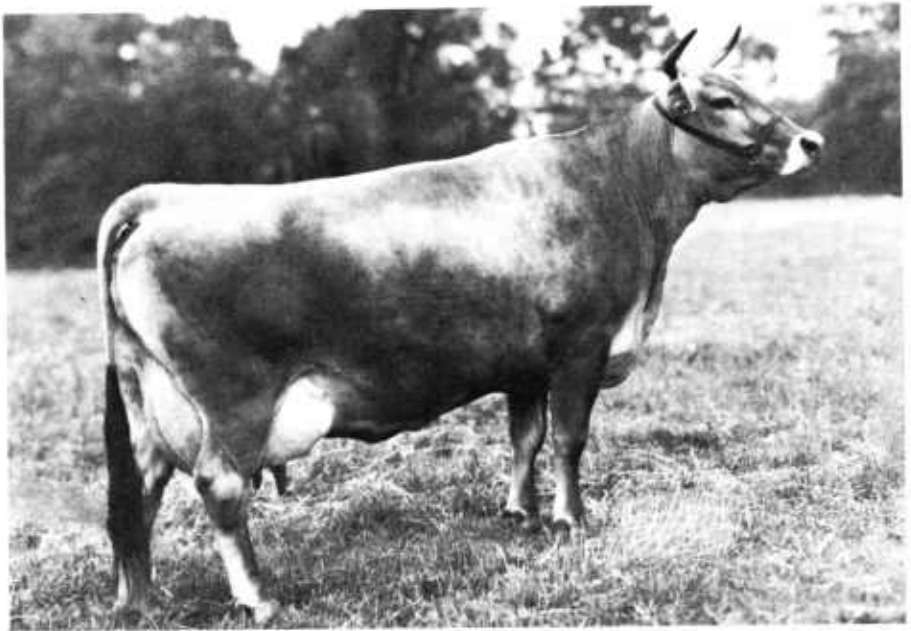
*Color.*—A shade of fawn with white markings clearly defined. Skin should show golden yellow pigmentation on the nose, around the eyes, in the ears, in the escutcheon, around the udder, and at the point of the tail.

When other points are equal, a clear or buff muzzle will be favored over a smoky or black muzzle.

*Size.*—A mature cow in milk should weigh at least 1,100 pounds. "In milk" means in normal condition after having been in milk for 3 to 6 months. A mature bull in breeding condition should weigh about 1,700 pounds.

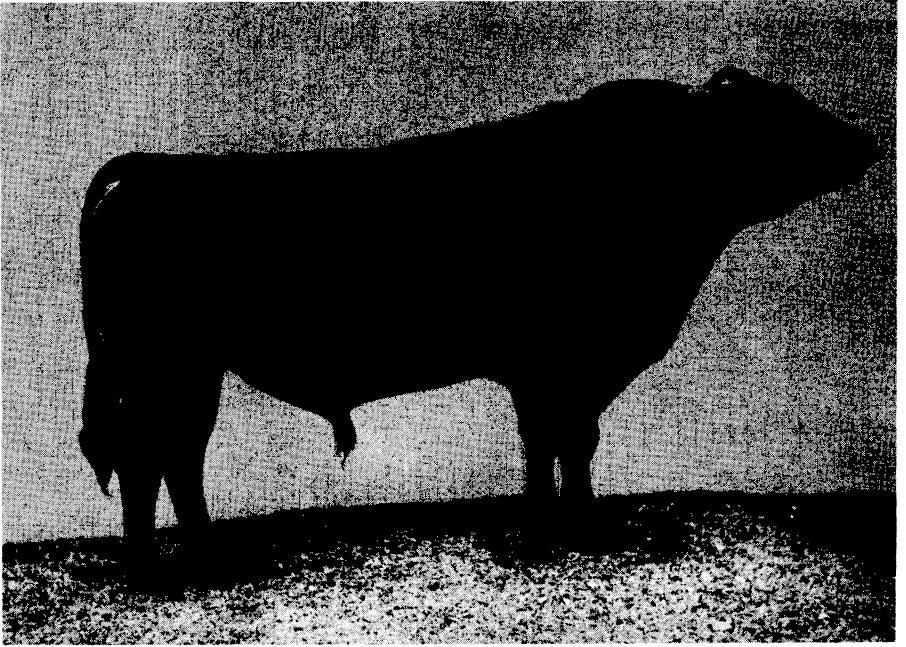


*Figure 4.*—Brown Swiss cow: Letha Irene Pride. (Courtesy of Brown Swiss Cattle Breeders Association.)



*Figure 5.*—Brown Swiss cow: Lee's Hill Keeper's Raven. (Courtesy of Brown Swiss Cattle Breeders Association.)





*Figure 6.*—Brown Swiss bull: Rainbow Wonder. (Courtesy of Northern Illinois Breeding Cooperative.)

Langmeadow Minnie (fig. 7) is an outstanding Guernsey with 26,695 pounds of milk and 1,461 pounds of butterfat in 365 days on twice-daily milking at 8 years of age. She classified Excellent and is a Gold Star Guernsey Dam.

Lush Acres Hermes Quest (fig. 8) is another famous Guernsey. She produced 17,529 pounds of milk, 1,104 pounds of butterfat as a

Junior 4-year-old in 365 days, three-times-daily milking, and classified Excellent with a type-class score of 95 points.

Foremost Quantity's Royal (fig. 9), an outstanding Guernsey bull, is recognized as a Gold Star Sire. His 39 tested daughters with 68 records average 11,134 pounds of milk, 511 pounds of butterfat in 305 days, twice-daily milking.

## Holstein-Friesian

Holstein-Friesian dairy cattle (commonly called Holstein in North America and Friesian in many other countries) probably originated in the northern part of the Netherlands.

The earliest settlers from the Netherlands brought the first Holstein cattle to the United States. The most significant importation was in 1861. A bull and four cows

from that importation and another bull from an 1857 importation founded a herd in Belmont, Mass., that supplied cattle to 12 States. No Holsteins were imported after 1905.

Scorecards adopted by the Pure-bred Dairy Cattle Association describe Holstein-Friesian in this way:

Strong masculine qualities in an alert bull possessing Holstein size and vigor and rugged feminine qualities in an alert cow possessing Holstein size and vigor.

TABLE 2.—*Brown Swiss production*

Age class	Pounds of milk	Pounds of butterfat
Junior 2-year-olds.....	9, 293. 7	346. 9
Senior 2-year-olds.....	8, 423. 6	356. 4
Junior 3-year-olds.....	9, 448. 4	394. 2
Senior 3-year-olds.....	9, 805. 6	409. 5
Junior 4-year-olds.....	10, 341. 5	433. 2
Senior 4-year-olds.....	10, 665. 5	444. 1
Five year-old-cows.....	10, 942. 4	453. 4
Mature cows.....	11, 203. 8	458. 6
Cows, 12 years old and older.....	10, 868. 7	437. 3

TABLE 3.—*Guernsey production*

Age class	Pounds of milk	Pounds of butterfat
Junior 2-year-olds.....	7, 760	380
Senior 2-year-olds.....	7, 957	390
Junior 3-year-olds.....	8, 502	420
Senior 3-year-olds.....	8, 557	426
Junior 4-year olds.....	9, 033	444
Senior 4-year-olds.....	9, 231	453
Mature cows.....	9, 400	449

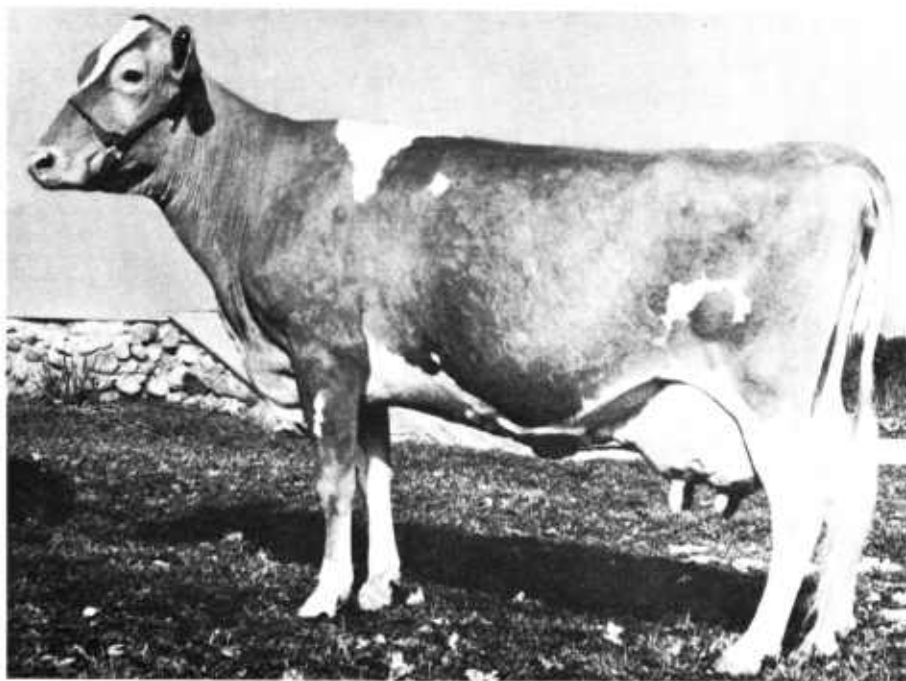


Figure 7.—Guernsey cow: Langmeadow Minnie. (Courtesy of American Guernsey Cattle Club.)

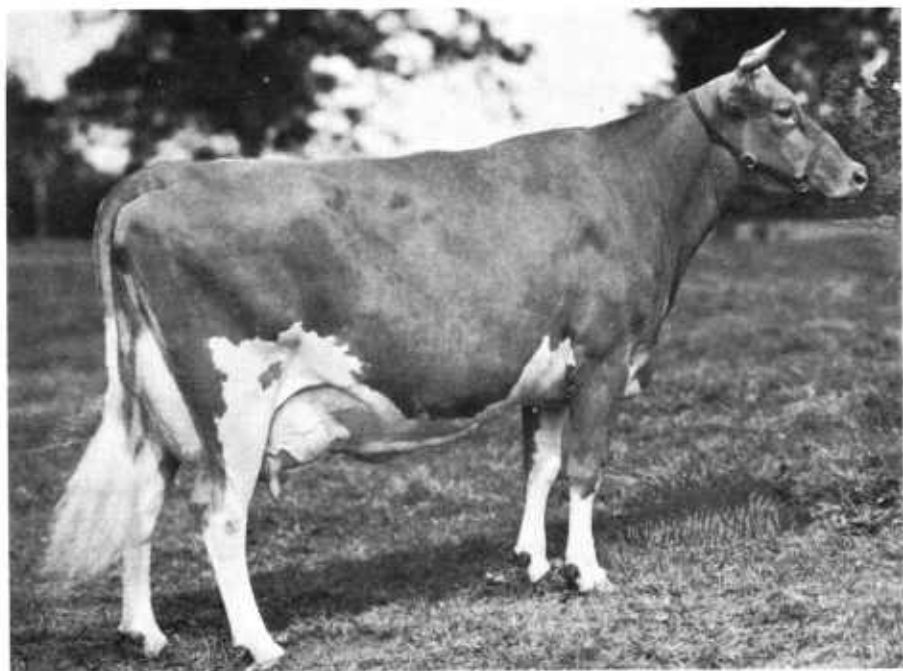
*Color.*—Black and white markings clearly defined. Color markings that bar registry are solid black, solid white, black in switch, black belly, black encircling leg touching hoof, black from hoof to knee or hock, black and white intermixed to give color other than distinct black and white.

*Size.*—A mature cow in milk should weigh 1,500 pounds or more. A mature bull in breeding condition should weigh 2,200 pounds or more. Calves at birth weigh from 80 to 125 pounds.

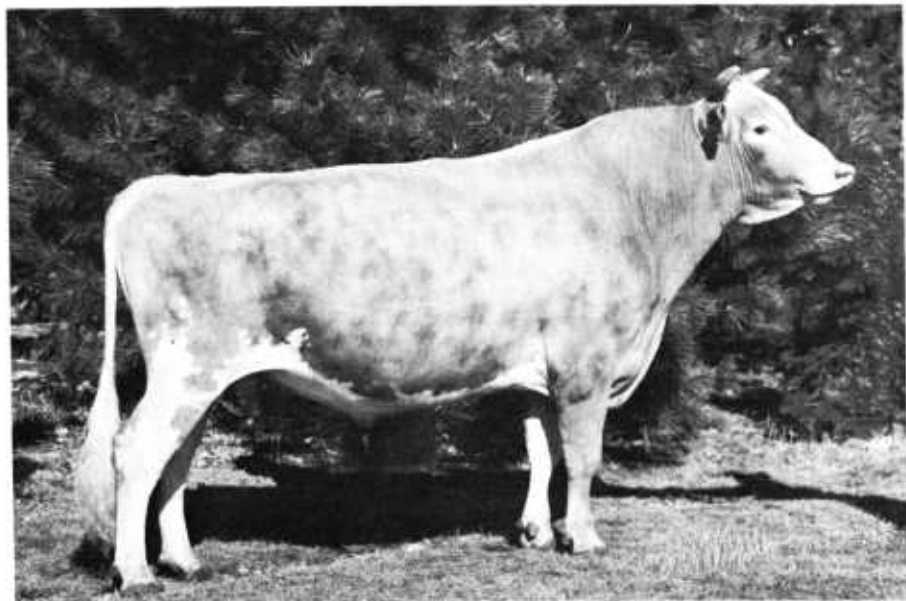
Princess Breezewood R. A. Patsy (fig. 10) established a new all-time, all-breed butterfat record of 1,866 pounds of butterfat in 36,821 pounds of milk, starting at 5 years and 2 months of age and milked twice daily for 365 days.

King View Francy Allegra (fig. 11) classified VG on type and produced 38,672 pounds of milk, 1,239 pounds of butterfat on twice-daily milking as a 9-year-old.

Sir Bess Ormsby Fobes Dean (fig. 12), an outstanding Holstein bull, has been used as a sire by the New York Artificial Breeding Corporation, Inc. He is recognized as a Gold Medal Holstein Sire. The average production of 791 of his artificially sired daughters was 12,449 pounds of milk (test, 3.7 percent) and 458 pounds of butterfat. His 394 classified daughters have an average type score of 81.7.



*Figure 8.*—Guernsey ew: Lush Aeres Hermes Quest. (Courtesy of American Guernsey Cattle Club.)



*Figure 9.*—Guernsey bull: Foremost Quantity's Royal. (Courtesy of American Guernsey Cattle Club.)

## Jersey

Jersey dairy cattle originated on the island of Jersey, off the coast of England.

Importation of Jerseys into the United States began in the early 1800's. Importation has continued since that time, except during war years and during outbreaks of foot-and-mouth disease.

By 1947, about 28,000 imported Jerseys were registered in this country.

Scorecards adopted by the Purebred Dairy Cattle Association describe the Jersey in this way:

*Color.*—A shade of fawn, with or without white markings.

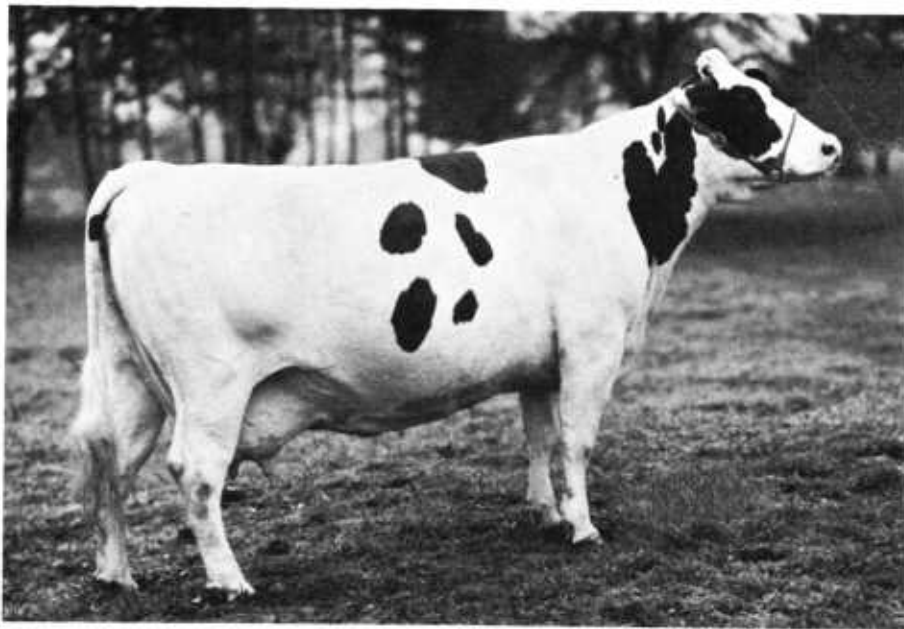
*Size.*—A mature cow in milk should weigh about 1,000 pounds. A mature bull in breeding condition should weigh about 1,500 pounds.

TABLE 4.—*Holstein production*

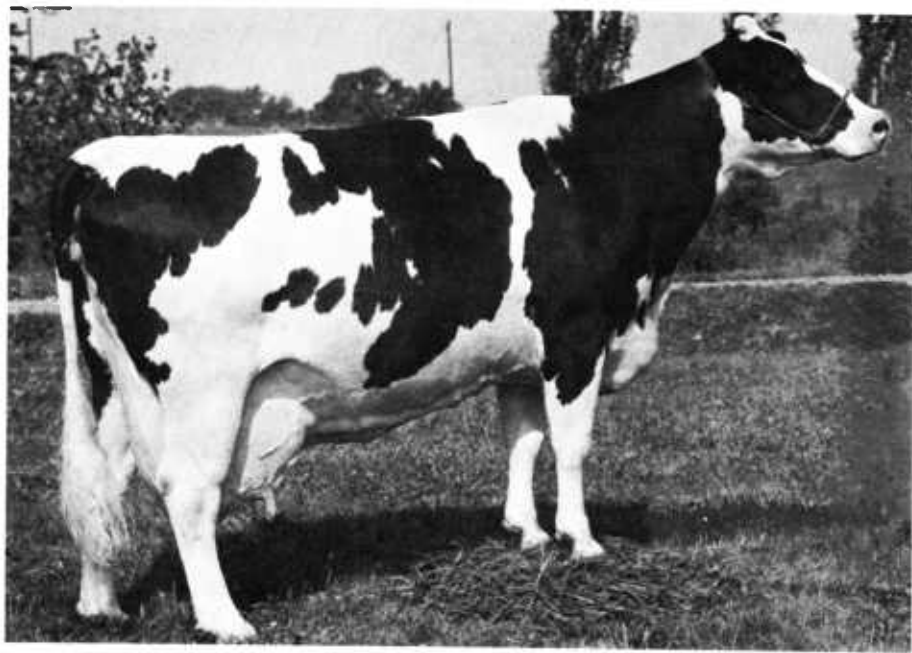
Age class	Pounds of milk	Pounds of butterfat
Junior 2-year-olds.....	10, 376	382
Senior 2-year-olds.....	10, 976	404
Junior 3-year-olds.....	11, 549	425
Senior 3-year-olds.....	12, 074	445
Junior 4-year-olds.....	12, 648	466
Senior 4-year-olds.....	12, 894	475
Mature cows.....	13, 281	489

TABLE 5.—*Jersey production*

Age class	Pounds of milk	Pounds of butterfat
Yearlings.....	6, 624	353
Junior 2-year-olds.....	6, 906	366
Senior 2-year-olds.....	7, 287	390
Junior 3-year-olds.....	7, 749	417
Senior 3-year-olds.....	7, 929	424
Junior 4-year-olds.....	8, 357	447
Senior 4-year-olds.....	8, 303	442
Cows, 5 to 11 years old.....	8, 759	457
Cows, 12 years old or older.....	8, 570	441



*Figure 10.*—Holstein cow: Princess Breezewood R. A. Patsy. (Courtesy of Holstein-Friesian Association of America.)



*Figure 11.*—Holstein cow: King View Francy Allegra. (Courtesy of Holstein-Friesian Association of America.)



*Figure 12.*—Holstein bull: Sir Bess Ormsby Fobes Dean. (Courtesy of New York State College of Agriculture at Cornell University.)

*Horns.*—Inclining, refined, medium length, and tapering toward tips; no discrimination for absence of horns.

Opal Crystal Lady (fig. 13), a breed champion in the United States in both milk and butterfat production, was the first cow of any breed to produce more than 1,000 pounds of butterfat during each of five consecutive lactations on two milkings a day. Her record is 23,725 pounds of milk and 1,237 pounds of butterfat.

Marlu Milady's Fashion (fig. 14) is classified Excellent and is the Jersey National ROM champion in both milk and fat production in three-times-a-day milking for 305 days. This record was made in 1955 with 18,104 pounds of milk containing 894 pounds of butterfat. She was then a senior 4-year-old. Her lifetime production to date is 115,691 pounds of milk with 5,704 pounds of fat.

Favorite Commando (fig. 15) is one of the top sires of the Jersey breed. He is recognized as a Century Sire and a Senior Superior Sire and has a 7-star rating. He has 111 tested daughters averaging 11,483 pounds of milk with 635 pounds of butterfat and 129 classified daughters whose type classification averages 89.48.

## Red Danish

Red Danish is one of the youngest recognized cattle breeds. These cattle originated in Denmark and became a distinct breed about 1878. They were first imported into the United States in 1935.

Mature Red Danish cows weight 1,300 to 1,500 pounds; mature bulls, 1,800 to 2,200. The characteristic red color appears in early crosses with little variation.

# DAIRY CATTLE ORGANIZATIONS

## Dairy Herd Improvement Association

The Dairy Herd Improvement Association (DHIA) sponsors a program through which dairymen may test their herds. Its facilities are available to any dairyman.

During the first 15 years, the Association's program accumulated nearly 4 million production records for nearly 2 million cows. Dam-and-daughter records for proving sires were also accumulated on about 150,000 bulls. The United States Department of Agriculture began to use these records in 1935 in a nationwide, sire-proving program—a program to find every bull whose daughters will outproduce their mothers.

The U.S. Department of Agriculture cooperates with the different States in coordinating this program. The Department also furnishes the forms used in collecting the production data and main-

tains the production records on each cow and bull whose owners participate in the program. Detailed information on the Dairy Herd Improvement Association may be obtained from your county agricultural agent or from the U.S. Department of Agriculture, Washington 25, D.C.

## Breed Associations

A national breed association or club is composed of breeders and dairymen who are interested in a particular breed of dairy cattle. Names and addresses of six such organizations are—

The Ayrshire Breeders Association, Brandon, Vt.

The Brown Swiss Cattle Breeders Association, Beloit, Wis.

The American Guernsey Cattle Club, Peterborough, N.H.

The Holstein-Friesian Association of America, Brattleboro, Vt.

The American Jersey Cattle Club, 1521 East Broad St., Columbus, Ohio.

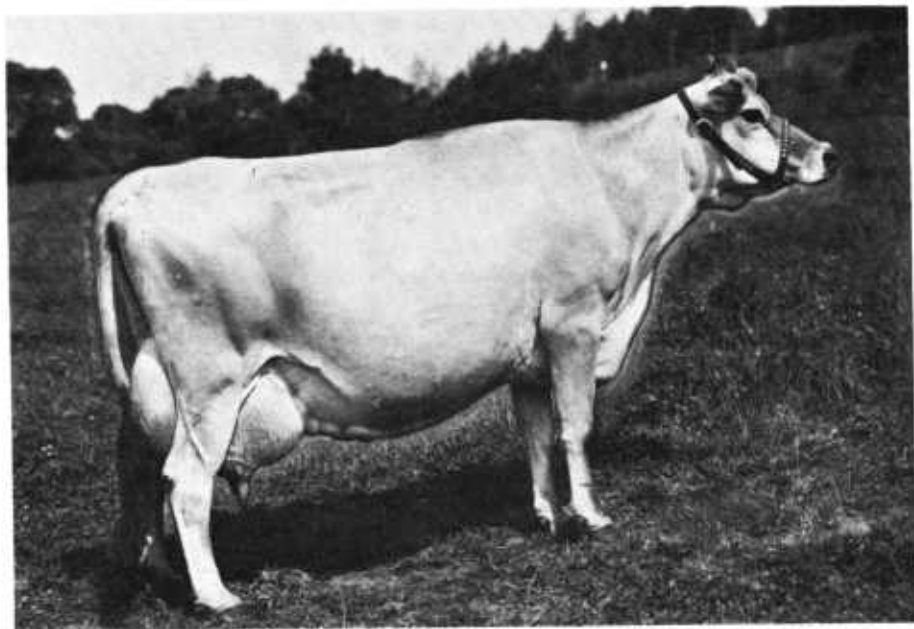
The American Red Danish Cattle Association, Route 3, Marlette, Mich.

Breed organizations keep the registration records for their re-

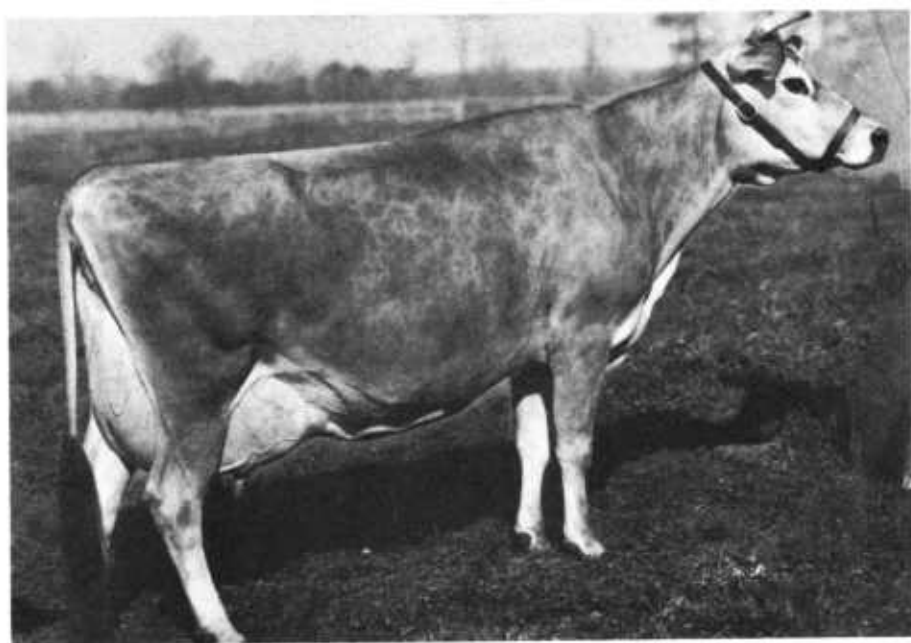
TABLE 6.—*Red Danish production*

Age class	Pounds of milk	Pounds of butterfat
Junior 2-year-olds.....	7, 603	308
Senior 2-year-olds.....	8, 851	357
Junior 3-year-olds.....	9, 027	360
Senior 3-year-olds.....	8, 410	341
Junior 4-year-olds.....	8, 506	353
Senior 4-year-olds.....	8, 926	359
Mature cows.....	9, 441	384





*Figure 13.*—Jersey cow: Opal Crystal Lady. (Courtesy of American Jersey Cattle Club.)



*Figure 14.*—Jersey cow: Marlu Milady's Fashion. (Courtesy of American Jersey Cattle Club.)

spective breeds. Those records include the names of animals that have qualified for additional registration because of meritorious performance. The organizations also administer programs that enable breeders to determine the performance of their animals. The programs include advanced registry testing or herd improvement testing.

The requirements for these official tests differ from breed to breed. Details may be secured by writing to the organizations at the addresses given.

### **Purebred Dairy Cattle Association**

The Purebred Dairy Cattle Association consists of three representatives from each of the organiza-

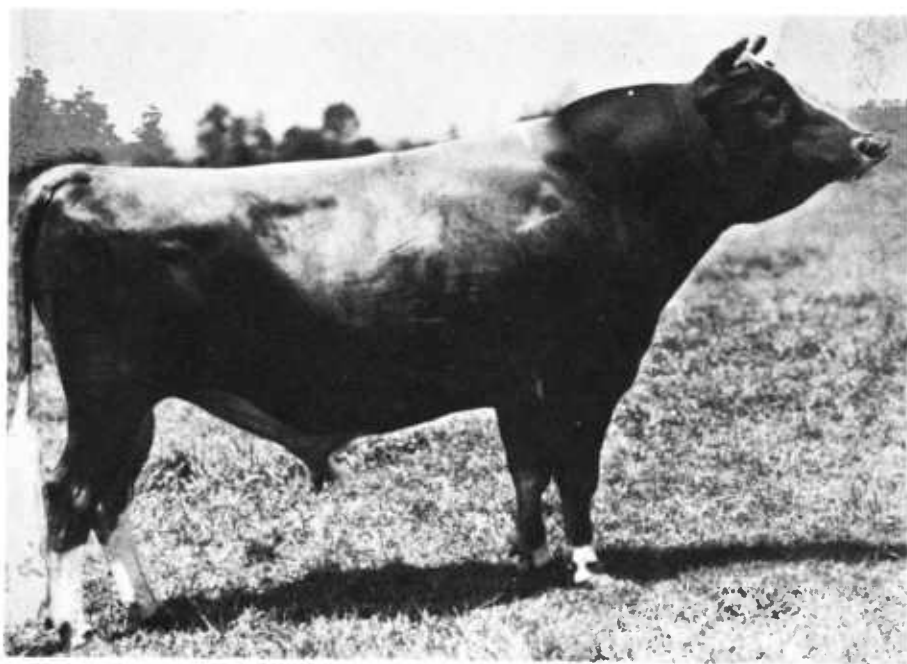
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### **Dual-Purpose Breeds**

A few breeds of cattle have desirable beef form and also produce more milk and butterfat than are usually produced by beef cattle. Examples of dual-purpose breeds are the Milking Shorthorn, the Red Poll, and the Devon. Additional information on beef cattle breeds for beef and for milk may be obtained from your county agricultural agent or from the U.S. Department of Agriculture, Washington 25, D.C.

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tions that sponsor the Ayrshire, Brown Swiss, Guernsey, Holstein, and Jersey breeds of dairy cattle in



*Figure 15.*—Jersey bull; Favorite Commando. (Courtesy of American Jersey Cattle Club.)

the United States. It seeks to interest dairymen and breeders generally in these five breeds and especially in individual animals of the breeds that it recognizes as being purebred and eligible for registration in the herd books.

Under sponsorship of the Association, the breed organizations have adopted rules and procedures. The rules and procedures apply only to individual members (not to the dairy industry generally) and include—

- Uniform rules for official testing.

- Uniform classification for each breed at State fairs.

- Rules governing artificial insemination of registered dairy cattle.

- A code of ethics for public and private sales.

- Uniform scorecard for judging junior fitting and showmanship contests.

- Showing and judging procedures.

Headquarters for the Purebred Dairy Cattle Association is at Peterborough, N.H.

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## DEFINITIONS

### Age Categories

Age-category definitions for the production tabulations used in this bulletin follow. Ages given are those of cows at start of test. All cows were milked twice a day for 305 days.

<i>Category</i>	<i>Cows that were—</i>
Junior 2-year-olds.....	2 to 2½ years old.
Senior 2-year-olds.....	2½ to 3 years old.
Junior 3-year-olds.....	3 to 3½ years old.
Senior 3-year-olds.....	3½ to 4 years old.
Junior 4-year-olds.....	4 to 4½ years old.
Senior 4-year-olds.....	4½ to 5 years old.
Mature cows.....	5 years old or older.

### Other Terms

*Purebred* dairy cattle have the characteristics of a certain breed and a documented, purebred ancestry.

*Registered purebreds* are purebred dairy animals whose owners have completed the formality of registration. The or-

ganization sponsoring a particular breed determines the qualifications needed for registration. Copies of registration rules can be obtained by writing to the various breed associations (see p. 15).

*Grade* dairy cattle have the characteristics of a particular breed, but are ineligible for registration, usually because their parents are not registered.

*Proved sires*, in Dairy Herd Improvement Association work (see p. 15), are bulls that have at least five unselected daughters whose production records can be compared with the production records of their respective mothers (dams). If the daughters produce at a high level (either above or near the production level of their dams), the bulls that sired the daughters are known as "good" proved sires. If the daughters produce at a low level, the bulls that sired them are known as "poor" proved sires and their use for breeding purposes is discouraged.

Most of the breed associations have similar procedures for issuing **proving** information although there is some variation regarding the number of daughters required and the inclusion or omission of the dams' average production.



# **Protect Your Family and Farm from FIRE**

**Repair defective chimneys, spark arresters, flues, stovepipes, and heating and cooking equipment.**

**Store gasoline and other flammables in approved containers and locations.**

**Remove fire hazards from storage areas.**

**Be sure electric wiring is safe and adequate . . . electric circuits are fused properly . . . electric equipment is in good repair.**

**See that lightning rods are properly grounded. Use properly grounded arresters on radio and television antennas.**

**Keep matches and chemicals away from children.**

**Have fire-fighting equipment ready.**

**FIRE---Hard to stop! Easy to prevent!**